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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of) Group Art Unit: 1632		
T T)		
Janet Rossant et al) Examiner:		
Appln. No.: 10/635,923)Confirmation No. 8861		
Filed: August 6, 2003))		
For: TROPHOBLAST CELL PREPARATIONS) February 2, 2004		
Commissioner for Patents PO Box 1450			
Alexandria, VA 22313-1450			

INFORMATION DISCLOSURE STATEMENT

Sir:

Applicants submits to the Examiner the attached Form PTO/SB/08A/B document listing and this paper pursuant to 37 CFR §1.56 and § 1.97-1.98. Form PTO/SB/08A/B and this paper identify documents previously cited in parent application, US Patent Application No. 09/786,585, filed March 7, 2001, which is a National Phase of PCT/CA99/00867 filed March 30, 2000, which claims the benefit of the priority of US Patent Application No. 60/101,483, filed September 23, 1998 and has issued on October 7, 2003 and given Patent Application No. 6,630,349.

According to 37 CFR § 1.98(d), Applicants have not enclosed copies of any US Patents, Publications or other documents listed herein, which listed items were previously cited by or submitted to the United States Patent and Trademark Office in prior parent US Patent Application No. 09/786,585, filed March 7, 2001. This application is relied upon for an earlier effective filing date under 35 USC § 120. The IDS submitted in the earlier application complies with paragraphs (a) through (c) of 37 CFR § 1.98(d).

Express Mail No. EU531575581US

REMARKS

The only document that was not previously cited or submitted is US Patent No. 6,630,349, issue on October 7, 2003.

No month of publication is available for items F-Q, T,U, V-X, Z, AA, BB, DD-FF, HH-II, MM-RR, TT-VV, BBB and CCC.

This Information Disclosure Statement is submitted more than three months from the filing date of this application, but before receipt of a first Office Action on the merits. Therefore, no fees are due. The Director of the U. S. Patent and Trademark Office is hereby authorized to charge any deficiency in any fees due with the filing of this paper or credit any overpayment in any fees paid on the filing, or during prosecution of this application to Deposit Account No. 08-3040.

The Examiner is respectfully requested to consider the enclosed documents during the course of the examination of this application.

Respectfully submitted,

HOWSON AND HOWSON Attorneys for the Applicants

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				Group Art Unit	1632
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Sheet	1	of	8	Attorney Docket Number	MTS2AUSA

	U.S. PATENT DOCUMENTS								
Examiner	Cite No.1	U.S. Patent I	Document	Name of Patentee or Applicant of	Date of Publication of	Pages, Columns, Lines, Where Relevant			
Initials*		Number	Kind Code ² (if known)	Cited Document	Cited document MM-DD-YYYY	Passages or Relevant Figures Appear			
	Α	5,670,372	B 1	B. Hogan	09-23-1997				
	В	6,630,349	В1	Rossant et al	10-7-2003				
	С	6,200,806	B1	Thomson	03-13-2001				
	D	5,942,435		Wheeler	08-24-1999				

FOREIGN PATENT DOCUMENTS										
Examiner Initials	Cite No.1		Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant	Té		
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	E	PCT	WO96/22362	Al	J. Thomson	07-25-1996				

Examiner	Date	
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D.G. Carlot		

^{*} EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not conside Include copy of this form with next communication to applicant.

Substitute for Form 1449A/PTO				Complete if Known		
	ATION DISCLOS ENT BY APPLICA			Application Number	10/635,923	
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			(5)	First Named Inventor	Janet Rossant et al	
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	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS							
Examiners Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²					
	F	J. ROSSANT, "Development of Extraembryonic Cell Lineages in the Mouse Embryo", in Experimental Approaches to Early Mammalian Development, ed. J. Rossant et al, pp. 97-120, Cambridge University Press, London (1986)						
	G	J. ROSSANT, "Development of the Extraembryonic Lineages", Seminars in Development Biology, 6:237-247 (1995)						
	Н	J. ROSSANT et al, "Investigation of the Potency of Cells from the Postimplantation Mouse Embryo by Blastocyst Injection: a Preliminary Report", J. Embryol. Exp. Morph., 48:239-247 (1978)						
	I	M. JOHNSON et al, "Molecular Studies on Cells of the Trophectodermal Lineage of the Postimplantation Mouse Embryo", J. Embryol. Exp. Morph., 61:103-116 (1981)						
	J	R. GARDNER, "An Investigation of Inner Cell Mass and Trophoblast Tissues Following Their Isolation from the mouse Blastocyst", J. Embryol. Exp. Morph., 28(2):279-312 (1972)						
	K	J. ROSSANT et al, "Effect of Culture Conditions on Diploid to Giant-Cell Transformation in Postimplantation Mouse Trophoblast", J. Embryol. Exp. Morph., 62:217-227 (1981)						
	L	E. ILGREN, "Review Article: Control of Trophoblastic Growth", Placenta, 4:307-328 (1983)						
	M	J. ROSSANT et al, "Properties of Extra-Embryonic Ectoderm Isolated from Postimplantation Mouse Embryos", J. Embryol. Exp. Morph., 39:183-194 (1977)						

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	N	E. ILGREN, "On the Control of the Trophoblastic Giant-Cell Transformation in the Mouse: Homotypic Cellular Interactions and Polyploidy", J. Embryol. Exp. Morph., 62:183-202 (1981)	
	0	L. NISWANDER et al, "Fgf-4 Expression During Gastrulation, Myogenesis, Limb and Tooth Development in the Mouse", Development, 114:755-768 (1992)	
	P	D. RAPPOLEE et al, "Expression and Function of FGF-4 in Peri-implantation Development in Mouse Embryos", Development, 120:2259-2269 (1994)	
	Q	A. ORR-URTREGER et al, "Developmental Localization of the Splicing Alternatives of Fibroblast Growth Factor Receptor-2 (FGFR2)", Developmental Biology, 158:475-486 (1993)	
	R	E. ARMAN et al, "Targeted Disruption of Fibroblast Growth Factor (FGF) Receptor 2 Suggests a Role for FGF Signaling in Pregastrulation Mammalian Development", Proc. Natl. Acad. Sci. USA, 95:5082-5087 (April, 1998)	
	S	B. FELDMAN et al, "Requirement of FGF-4 for Postimplantation Mouse Development", Science, 267:246-249 (January, 1995)	
	Т	N. CHAI et al, "FGF is an Essential Regulator of the Fifth Cell Division in Preimplantation Mouse Embryos", Developmental Biology, 198:105-115 (1998)	
	U	B. HOGAN et al, "Manipulating the Mouse Embryo", Cold Spring Harbor Laboratory Press, 2 nd ed., pp. 265-272, Cold Spring Harbor, New York (1994)	

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	V	E. ROBERTSON et al, "Embryo-derived Stem Cell Lines", in Teratocarcinomas and Embryonic Stem Cells, Chapter 4, pp. 71-112, ed. E. Robertson, JRL Press, Oxford (1987)	
	W	JE. FLECHON et al, "Isolation and Characterization of a Feeder-dependent, Porcine Trophectoderm Cell Line Obtained from a 9-Day Blastocyst", Placenta, 16:643-658 (1995)	
	X	K. PETTERSSON et al, "Expression of a Novel Member of Estrogen Response Element-Binding Nuclear Receptors is Restricted to the Early Stages of Chorion Formation During Mouse Embryogenesis", Mechanisms of Development, 54:211-223 (1996)	
	Y	J. LUO et al, "Placental Abnormalities in Mouse Embryos Lacking the Orphan Nuclear Receptor ERR-β", Nature, 388:778-782 (August, 1997)	
	Z	F. BECK et al, "Expression of Cdx-2 in the Mouse Embryo and Placenta: Possible Role in Patterning of the Extra-Embryonic Membranes", Developmental Dynamics, 204:219-227 (1995)	
	AA	B. CIRUNA et al, "Gene Expression Pattern, Expression of the T-box Gene Eomesodermin During Early Mouse Development", Mechanisms of Development, 81:199-203 (1999)	
	ВВ	K. LESCISIN et al, "Isolation and Characterization of a Novel Trophoblast-specific cDNA in the Mouse", Genes and Development, 2:1639-1646 (1988)	

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	CC	F. GUILLEMOT et al, "Essential Role of Mash-2 in Extraembryonic Development", Nature, 371:333-336 (September, 1994)	
	DD	M. TANAKA et al, "Mash2 Acts Cell Autonomously in Mouse Spongiotrophoblast Development", Developmental Biology, 190:55-65 (1997)	
	EE	T. FARIA et al, "Localization of Placental Lactogen-I in Trophoblast Giant Cells of the Mouse Placenta", Biology of Reproduction, 44:327-331 (1991)	
	FF	J. CROSS et al, "Hxt Encodes a Basic Helix-Loop-Helix Transcription Factor that Regulates Trophoblast Cell Development", Development, 121:2513-2523 (1995)	
	GG	P. RILEY et al, "The Hand1 bHLH Transcription Factor is Essential for Placentation and Cardiac Morphogenesis", Nature Genetics, 18:271-275 (March, 1998)	
	нн	S. PALMIERI et al, "Oct-4 Transcription Factor is Differentially Expressed in the Mouse Embryo During Establishment of the First Two Extraembryonic Cell Lineages Involved in Implantation", Developmental Biology, 166:259-267 (1994)	
	II	H. SCHOLER et al, "Oct-4: a Germline-specific Transcription Factor Mapping to the Mouse t-complex", EMBO J., 9(7):2185-2195 (1990)	
	JJ	D. WILKINSON et al, "Expression Pattern of the Mouse T Gene and its Role in Mesoderm Formation", Nature, 343:657-659 (February, 1990)	
	KK	S. WOOD et al, "Non-Injection Methods for the Production of Embryonic Stem Cell- Embryo Chimaeras", Nature, 365:87-89 (September, 1993)	

Examiner	Date
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	LL	S. DUNCAN et al, "Expression of Transcription Factor HNF-4 in the Extraembryonic Endoderm, Gut, and Nephrogenic Tissue of the Developing Mouse Embryo: HNF-4 is a Marker for Primary Endoderm in the Implanting Blastocyst", Proc. Natl. Acad. Sci. USA, 91:7598-7602 (August, 1994)	
	MM	A-K. HADJANTONAKIS et al, "Generating Green Fluorescent Mice by Germline Transmission of Green Fluorescent ES Cells", Mechanisms of Development, 76:79-90 (1998)	
	NN	K. GRIFFIN et al, "Molecular Identification of Spadetail: Regulation of Zebrafish Trunk and Tail Mesoderm Formation by T-box Genes", Development, 125:3379-3388 (1998)	
	00	K. GRIFFIN et al, "Analysis of FGF Function in Normal and No Tail Zebrafish Embryos Reveals Separate Mechanisms for Formation of the Trunk and the Tail", Development, 121:2983-2994 (1995)	
	PP	M. POWNALL et al, "Two Phases of Hox Gene Regulation During Early Xenopus Development", Current Biology, 8:673-676 (1998)	
	QQ	H. ISAACS et al, "Regulation of Hox Gene Expression and Posterior Development by the Xenopus caudal Homologue Xcad3", EMBO J., 17(12):3413-3427 (1998)	
	RR	C. STEWART et al, "Expression of Retroviral Vectors in Transgenic Mice Obtained by Embryo Infection", EMBO J., 6(2):383-388 (1987)	

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	NFORMATION DISCLOSURE FATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number	10/635,923
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	SS	R. HEIM et al, "Wavelength Mutations and Posttranslational Autoxidation of Green Fluorescent Protein", Proc. Natl. Acad. Sci. USA, 91:12501-12504 (December, 1994)
	TT	M. ZERNICKA-GOETZ et al, "Following Cell Fate in the Living Mouse Embryo", Development, 124:1133-1137 (1997)
	บบ	M. OKABE et al, "Green Mice as a Source of Ubiquitous Green Cells", FEBS Letters, 407:313-319 (1997)
	VV	D. HILL et al, "Screening for Novel Pattern Formation Genes Using Gene Trap Approaches", Methods in Enzymology, 225:664-681 (1993)
	ww	H. VAN DER PUTTEN et al, "Efficient Insertion of Genes into the Mouse Germ Line Via Retroviral Vectors", Proc. Natl. Acad. Sci. USA, 82:6148-6152 (September, 1985)
	XX	H. NAKAYAMA, The Transition to Endoreduplication in Trophoblast Giant Cells is Regulated by the mSNA Zinc Finger Transcription Factor. Development Biology 199, 150-163 (July 1, 1998)
	YY	WEISSMAN, Science, Translating Stem and Progenitor Vell Biology to the Clinic: Barriers and Opportunities, Vol. 287, pp. 1442-1446, (February 2000)
	ZZ	DONOVAN ET AL, Nature, The end of the beginning for Pluripotent Stem Cells, Vol. 414, pp. 92-97, (November 2001)
	AAA	HAMLIN ET AL, Endocrinology, Regulation of Deoxyribonucleic Acid Synthesis in Proliferating and Differentiating Trophpblast Cells: Involovement of Transferrin, Transforming Growth Factor-Beta, and Tyrosine Kinases, Vol. 136, No. 1, pp. 322-331, (January 1995)
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	BBB	ANDRAS NAGY ET AL, Production of Completely ES Cell-Derived Fetuses, Gene Targeting: A Practical Approach, A. Joyner ed., pp. 147-179 (1993)				
	ccc	WOLFGANG WURST ET AL, Production of Targeted Embryonic Stem Cell Clones, Gene Targeting, A. Joyner ed., IRL Press, pp. 33-61 (1993)				
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